

RECEIVED
CENTRAL FAX CENTER

JUL 23 2007

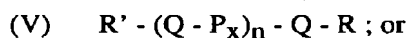
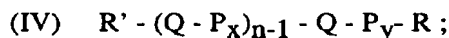
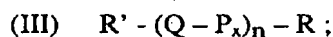
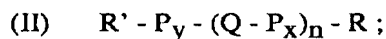
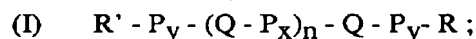
Appl. No. 10/769,344
Atty. Docket No. 9005MR
Amdt. dated 07/23/2007
Reply to Office Action of 03/22/2007
Customer No. 27752

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A composition comprising:

- a) from about 1 to about 98 wt% a thermoplastic elastomer, which is a block copolymer having at least one soft block and at least one hard block;
- b) from about 1 to about 70 wt% a phase change solvent having the general formula:



a mixture thereof;

wherein Q is a substituted or unsubstituted difunctional aromatic moiety; P is CH₂; R and R' are the same or different and are independently selected from H, CH₃, COOH, CONHR₁, CONR₁R₂, NHR₃, NR₃R₄, hydroxy, or C1-C30 alkoxy; wherein R₁, R₂, R₃ and R₄ are the same or different and are independently selected from H or linear or branched alkyl from C1-C30; x is an integer from 1 to 30; y is an integer from 1 to 30; and n is an integer from 3 to 7; and

- c) from about 1 to about 70 wt% of a processing oil selected from the group consisting of poly (alpha olefins), olefinic oligomers, mineral oils, paraffinic oils, isoparaffinic oils, naphthenic oils, petrolatum, waxes, or mixtures thereof producing a glass transition temperature of greater than about 85°C for a polystyrene homopolymer;

wherein the phase change solvent has a phase change in a temperature range from about 40°C to about 250°C[.]; and

- d) from about 0.1 to about 50 wt% a nucleating agent.

Appl. No. 10/769,344
Atty. Docket No. 9005MR
Amdt. dated 07/23/2007
Reply to Office Action of 03/22/2007
Customer No. 27752

2. (Original) The composition of Claim 1 wherein the processing oil producing a glass transition temperature of greater than about 87°C for a polystyrene homopolymer.
3. (Original) The composition of Claim 1 wherein the processing oil producing a glass transition temperature of greater than about 90°C for a polystyrene homopolymer.
4. (Canceled)
5. (Original) The composition of Claim 1 wherein the synthetic processing oil is a poly(alpha olefin).
6. (Original) The composition of claim 5 wherein the poly(alpha olefin) is selected from the group consisting of polydodecenes, polydecenes, polyoctenes, polybutylenes, polybutenes, and mixtures thereof.
7. (Original) The composition of claim 5 wherein the poly(alpha olefin) is selected from the group consisting of poly(1-decene), poly(1-dodecene), poly(1-octene), and mixtures thereof.
8. (Original) The composition of Claim 1 wherein the processing oil is a mixture of a synthetic oil and a natural oil.
9. (Original) The composition of Claim 8 wherein the synthetic oil comprises at least about 40% of the processing oil mixture.
10. (Original) The composition of Claim 1 wherein the processing oil has a molecular weight in the range of from about 500 to about 3000 g/mol.
11. (Canceled)

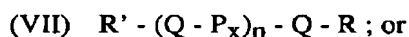
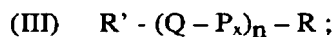
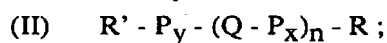
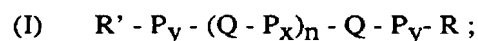
Appl. No. 10/769,344
 Atty. Docket No. 9005MR
 Amdt. dated 07/23/2007
 Reply to Office Action of 03/22/2007
 Customer No. 27752

12. (Original) The composition of Claim 1 additionally comprising from about 1 to about 50 wt% a thermoplastic polymer.

13. (Original) The composition of Claim 1 wherein the composition has a shear viscosity of about 0.1 to about 3000 Pa·s at 190°C and 1 sec⁻¹.

14. (Currently Amended) A composition comprising:

- a) from about 1 to about 99 wt% a thermoplastic elastomer, which is a block copolymer having at least one soft block and at least one hard block;
- b) from about 1 to about 70 wt% a phase change solvent having the general formula:



a mixture thereof;

wherein Q is a substituted or unsubstituted difunctional aromatic moiety; P is CH₂; R and R' are the same or different and are independently selected from H, CH₃, COOH, CONHR₁, CONR₁R₂, NHR₃, NR₃R₄, hydroxy, or C1-C30 alkoxy; wherein R₁, R₂, R₃ and R₄ are the same or different and are independently selected from H or linear or branched alkyl from C1-C30; x is an integer from 1 to 30; y is an integer from 1 to 30; and n is an integer from 3 to 7; and

- c) from about 1 to about 70 wt% of a processing oil composition comprising a synthetic oil and a natural oil and producing a glass transition temperature of greater than about 85°C for a polystyrene homopolymer;

wherein the phase change solvent has a phase change in a temperature range from about 40°C to about 250°C[.]; and

- d) from about 0.1 to about 50 wt% a nucleating agent.

Appl. No. 10/769,344
Atty. Docket No. 9005MR
Amdt. dated 07/23/2007
Reply to Office Action of 03/22/2007
Customer No. 27752

15. (Currently Amended) A method of lowering the viscosity and improving the processability of a thermoplastic elastomer, the method comprising the step of:

blending from about 1 to about 99 wt% of the thermoplastic elastomer, which is a block copolymer having at least soft block and at least one hard block, from about 1 to about 70 wt% of a phase change solvent having the general formula (I) – (V) of claim 1, or a mixture thereof, [[and]] from about 1 to about 70 wt% of a processing oil producing a glass transition temperature of greater than about 85°C for a polystyrene homopolymer to form an elastomeric composition; and one or more additional ingredient selected from the group consisting of: from about 0.1 to about 50 wt% of a nucleating agent, from about 1 to about 50 wt% of a thermoplastic polymer, and mixtures thereof;

wherein the shear viscosity of the elastomeric composition is lower than the shear viscosity of the thermoplastic elastomer when measured at 190°C and 1 sec⁻¹.

16. (Original) The method of claim 15 wherein the elastomeric composition has a shear viscosity of about 0.1 to about 3000 Pa·s at 190°C and 1 sec⁻¹.

17. (Canceled)

18. (Original) The method of Claim 15 wherein the processing oil has a molecular weight in the range of from about 500 to about 3000 g/mol

19. (Original) The method of Claim 15 wherein the processing oil comprises 50% of a mineral oil and 50% of a synthetic oil.

20. (Original) The method of Claim 19 wherein the synthetic oil is a poly (alpha olefin).